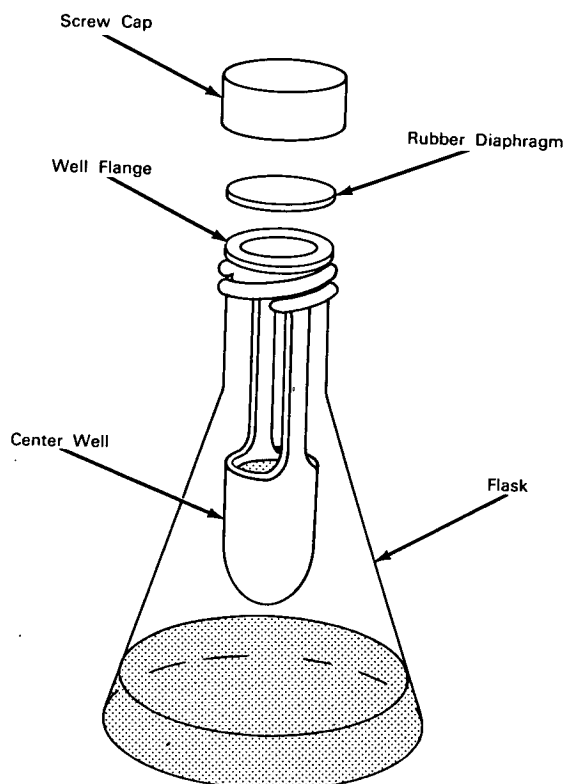


NASA TECH BRIEF



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Removable Well in Reaction Flask Facilitates CO₂ Collection



The problem: To devise an improved absorption well for quantitative collection of CO₂ liberated in a sealed reaction flask (e.g., an Erlenmeyer flask), such as is used for incubation studies of tissue slices and decarboxylation experiments.

The solution: A removable plastic well with a flange that seats on the rim of an Erlenmeyer screw-cap flask.

How it's done: The collection well is fabricated from a thermoplastic tube (such as is used for centrifuging). To form the flange, a warm soldering iron is used to fold the open end of the tube over a shoulder in a retainer.

Openings for the entry of CO₂ evolved from the medium in the bottom of the flask are cut in the side of the tube with a sharp knife. The flask assembly with

(continued overleaf)

the separate liquid contents is sealed with a rubber diaphragm and screw cap.

Notes:

1. The well containing the CO₂ fraction can be easily removed without danger of cross contamination after the reaction is completed.
2. With appropriate absorbents, other gases can be collected in the well.
3. The apparatus may be used to carry out various other reactions in a closed system. Respective reagents to be admixed after the system is closed would be placed in the well and the bottom of the flask prior to sealing the apparatus. Mixing of the separate reagents is easily accomplished by tipping the flask.

4. Different sizes and configurations of center wells of this type can be made.
5. Further information concerning this device is presented in "An Improved CO₂ Collection Well for Use in Incubation Studies" by E. D. Neville and D. D. Feller, Analytical Biochemistry, Vol. 11, No. 1, April 1965. Inquiries may also be directed to:

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Reference: B65-10316

Patent status: NASA encourages commercial use of this innovation. No patent action is contemplated by NASA.

Source: (ARC-47)